

Attachment 4

Alcoa Warrick Attainment Discussion

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ALCOA Warrick Power Plant (Source ID: 173-00007) and Warrick Operations (Source ID: 173-00002)

Aluminum Manufacturing Company of America (ALCOA) operates an aluminum manufacturing facility and power plant in Newburgh, Indiana, along the northern bank of the Ohio River in Anderson Township, Warrick County. The Indiana Department of Environmental Management (IDEM) believes Warrick Power Plant and Warrick Operations and the surrounding area should be designated attainment based on historical sulfur dioxide (SO₂) ambient monitoring data showing attainment of the SO₂ standard.

Warrick Power and Warrick Operations were determined to be sources subject to United States Environmental Protection Agency's Data Requirements Rule (DRR) based on actual 2014 SO₂ emissions of 4,993 tons and 3,500 tons, respectively. However, Warrick Operations shut down its smelter operations as of March 31, 2016, and has therefore ceased to generate potline point SO₂ emissions, potline smelter line source SO₂ emissions, or SO₂ emissions from the anode baking ring furnace. Warrick Operations currently operates a rolling mill that uses natural gas and will generate SO₂ emissions of less than one ton per year.

Historical SO₂ data from monitors operated by ALCOA prior to the shut-down of the smelter show attainment of the 2010 primary SO₂ 1-hour National Ambient Air Quality Standard (NAAQS). Tables 1 and 2 provide data from SO₂ monitors operated by ALCOA for several years prior to the smelting operation's shutdown. The tables also show data from the SO₂ monitor that IDEM operates in the region near the ALCOA Warrick facility.

As shown in the tables, all 99th percentile values since 2009 are below the 1-hour standard. In addition, the most recently available design value (2008 – 2010), and all recent partial-year design values, are also below the 1-hour standard. These low monitor values occurred during the time when the operations plant and the power plant were in full operation. As such, it is reasonable to conclude that the area surrounding the ALCOA Warrick facilities is in attainment of the 1-hour SO₂ NAAQS. As such, Indiana is recommending Anderson Township, Warrick County, Indiana as attainment.

Table 1: Warrick County SO₂ Monitor Data - 99th Percentile Values
(parts per billion) (2005 – 2016)

Site ID	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016
IDEM Operated												
181630021	66	67	69	41	17	18.8	19.4	16.5	18.6	32.3	18	11 ^a
ALCOA Operated												
181730002	143	199	103	111	38	18	Not Operational				23	36 ^b
181730004	Not Operational										63	57 ^b
181730005	Not Operational										46	42 ^b
181730012	Not Operational										59	62 ^b

^a – Data through July 31, 2016.

^b – Data through June 30, 2016.

Table 2: Warrick County SO₂ Monitor Data – Design Values
(parts per billion) (2007 – 2016)

Site ID	2005 - 2007	2006 - 2008	2007 - 2009	2008 - 2010	2009 - 2011	2010 - 2012	2011 - 2013	2012 - 2014	2013 – 2015	2014 – 2016
IDEM Operated										
181630021	67	59	43	26	18	18	18	22	23	21
ALCOA Operated										
181730002	148	138	84	56	Not Operational				23 ^a	30 ^b
181730004	Not Operational								63 ^a	60 ^b
181730005	Not Operational								46 ^a	44 ^b
181730012	Not Operational								59 ^a	61 ^b

^a – Based on one year of data.

^b – Based on two years of data.